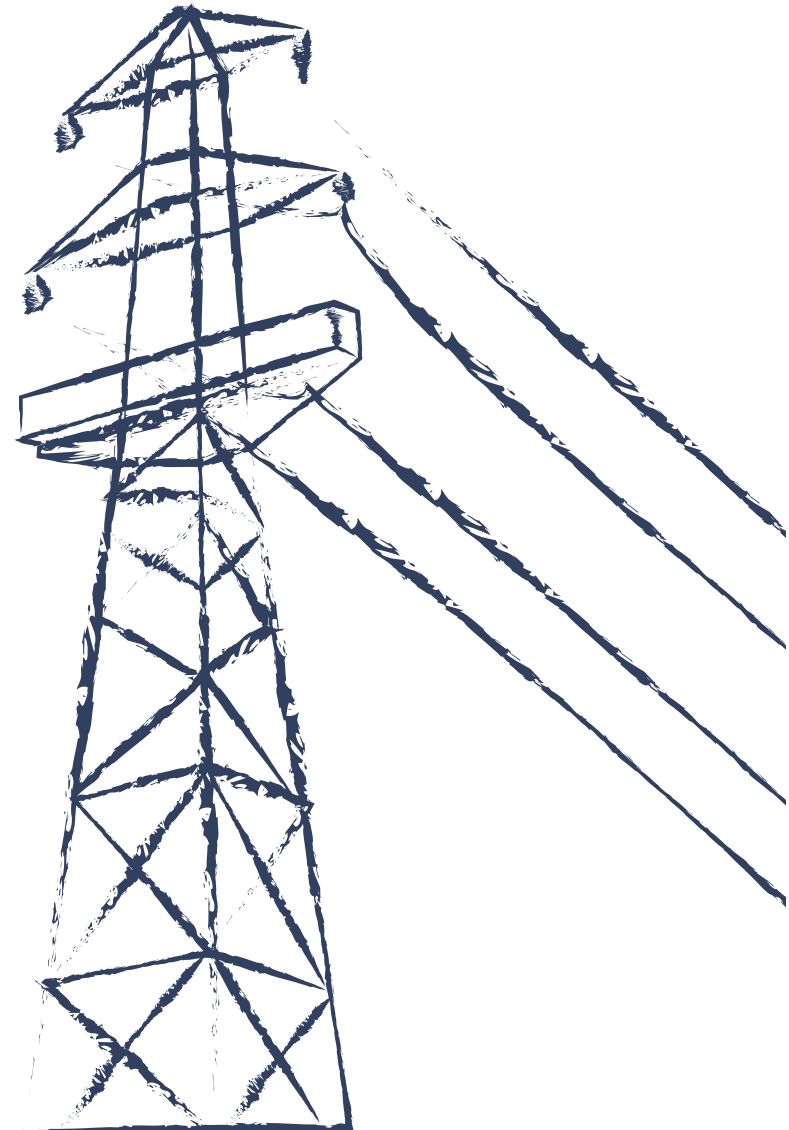


Winds of change in the transmission system

Swissgrid Grid Forum 2024

Antonella Battaglini
CEO
Renewables Grid Initiative



My Talking Points

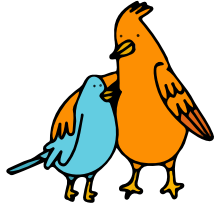
- About RGI: Introducing the Renewables Grid Initiative
- Winds of Change, more and faster
- Today's Energy System - from waste to optimisation and resilience
- Building the infrastructure we need Nature & People Positive
- Where do we go from here? CSRD and reporting contributions

About RGI

Introducing the Renewables Grid Initiative



ABOUT RGI



RGI is a unique collaboration of NGOs and TSO from across Europe engaging in an 'energy transition ecosystem-of-actors'.

We promote **fair, transparent, sustainable grid development** to enable the growth of renewables to achieve full decarbonisation in line with the Paris Agreement.

TRANSMISSION SYSTEM OPERATORS (TSOS)



NON-GOVERNMENTAL ORGANISATIONS (NGOS)



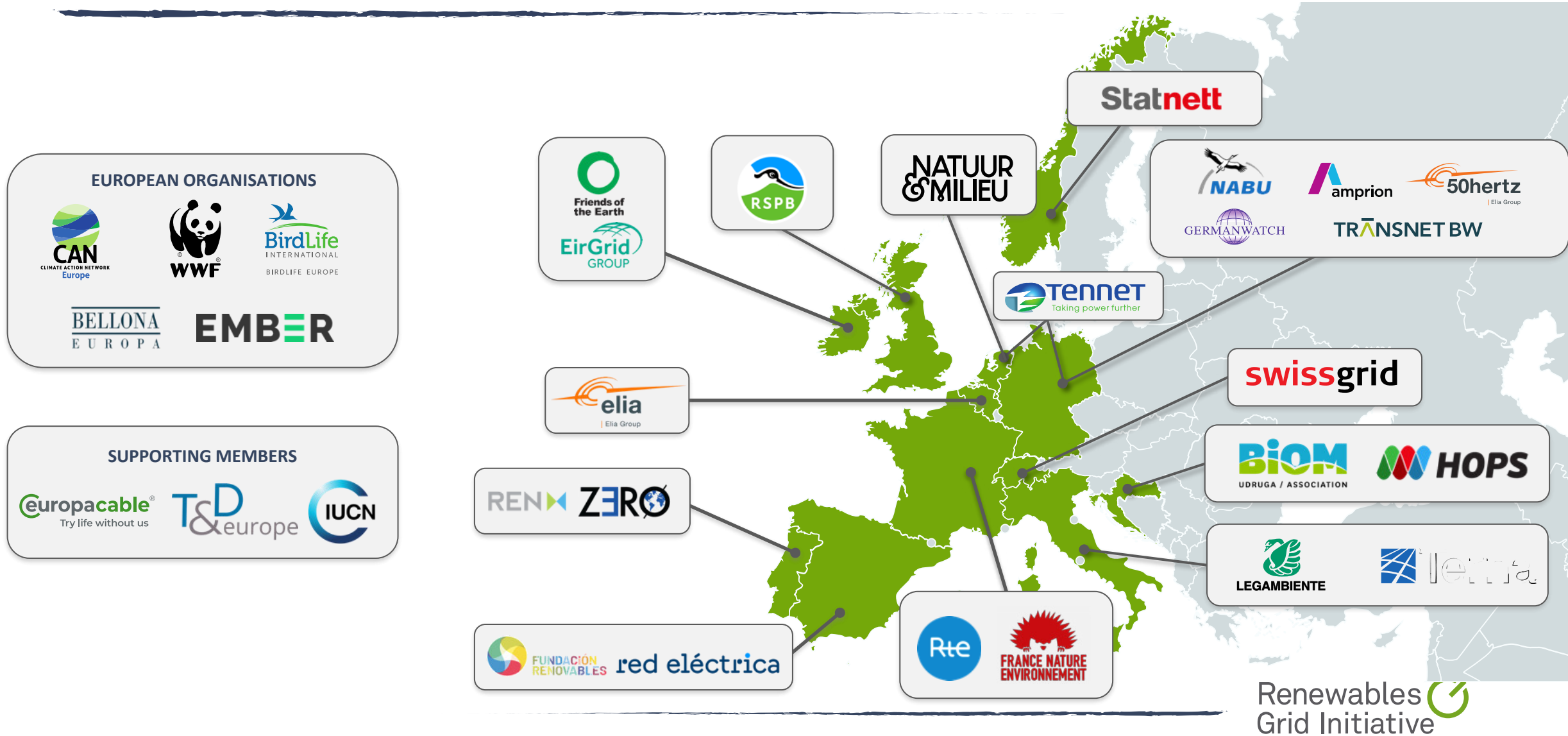
Renewables
Grid Initiative

SUPPORTING MEMBERS



Renewables
Grid Initiative

THE GEOGRAPHY OF RGI



HOW IS OUR WORK STRUCTURED?

We foster knowledge exchange, discussions on the grid infrastructure needs, and the implementation of best practices within **three dimensions**:

GRIDS & ENERGY SYSTEMS

We enable discussions on how to **model, plan and implement** decarbonised and optimised clean energy systems, including different voices in the process.

ENERGY & NATURE

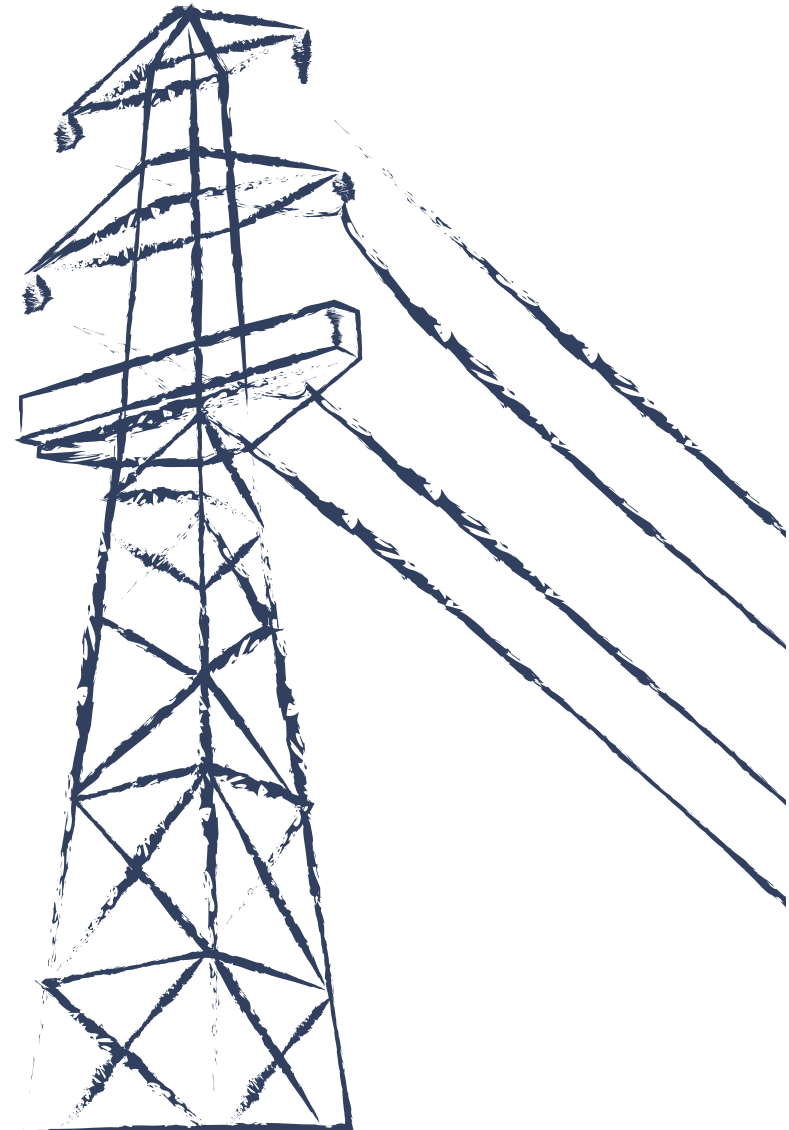
We ensure energy systems both onshore and offshore are developed in **coherence with nature and biodiversity**, promoting mitigation, enhancement and restoration measures.

ENERGY & SOCIETY

We include and engage **citizens, civil society and policymakers** on strategies towards full decarbonisation, building capacity on the role of grids within the energy transition.

Winds of Change

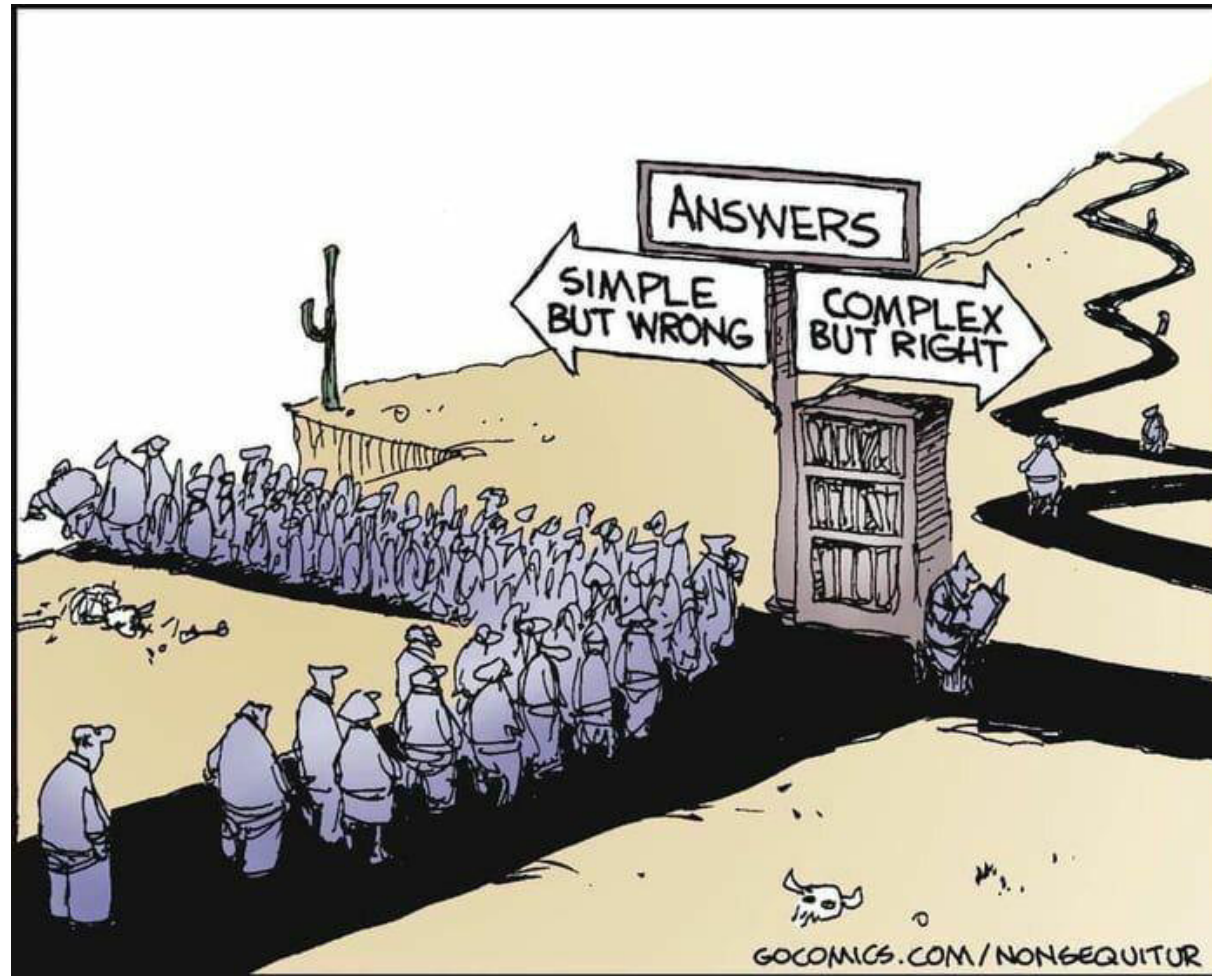
Transforming our energy system



PROBLEMS NEVER COME ALONE!



SOLUTIONS ARE IN COMPLEXITY



HOW TO RESPOND TO CHALLENGES?

ENERGY CRISIS

- Reduce waste
- Increase national resources
- Optimise utilisation

CLIMATE CRISIS

- Decarbonise faster
- Increase RES deployment
- Expand the grid/Electrify

CURRENT SITUATION: ENERGY FLOW IN EUROPE

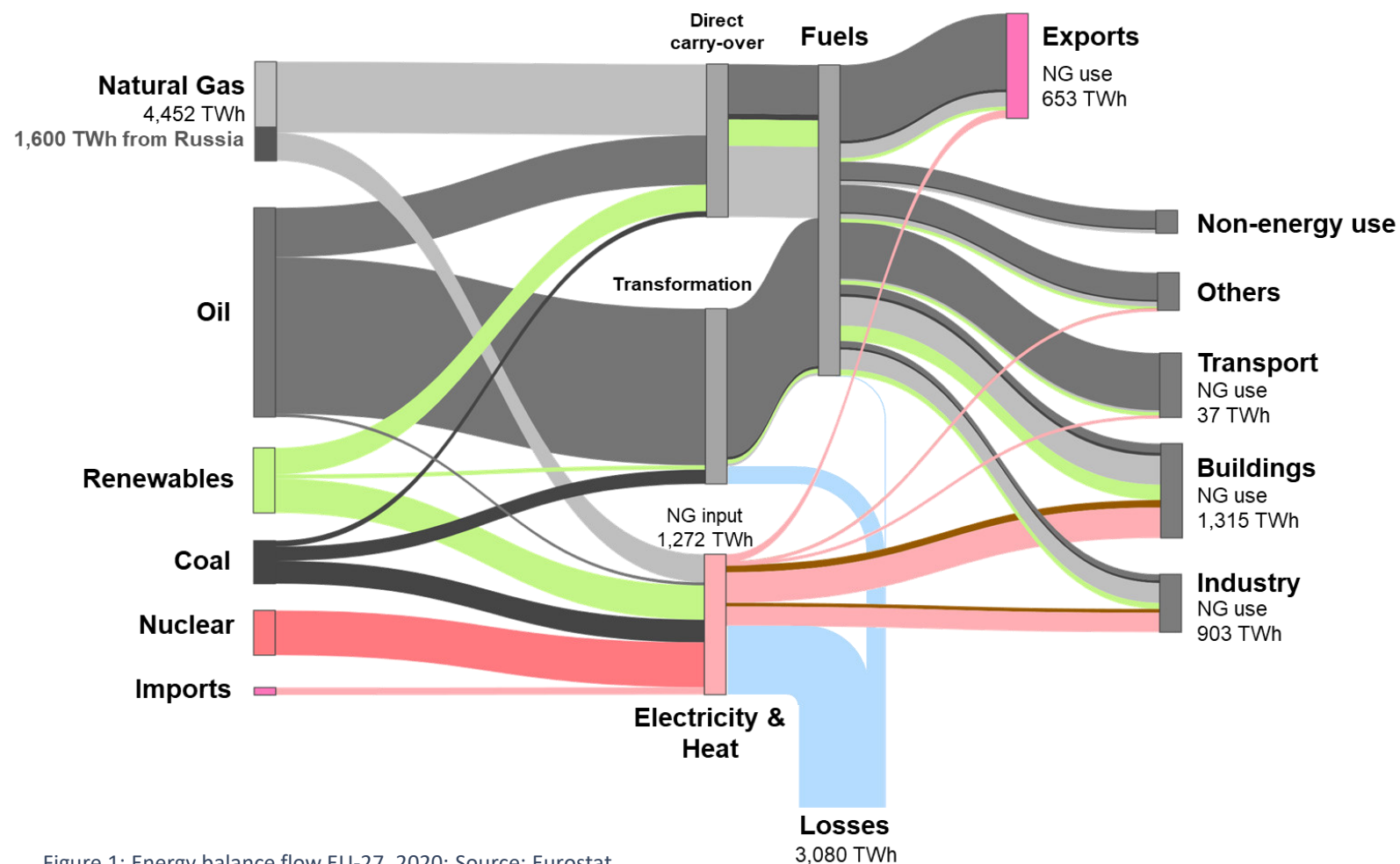


Figure 1: Energy balance flow EU-27, 2020; Source: Eurostat

Effect of COVID-19 pandemic on energy consumption:



Electricity consumption:

2019	2,480 TWh	
2020	2,383 TWh	-4%



Natural gas consumption:

2019	2,545 TWh	
2020	2,467 TWh	-3%



Primary energy supply:

2019	23,027 TWh	
2020	20,983 TWh	-9%

ELECTRIFICATION IS A NO-BRAINER

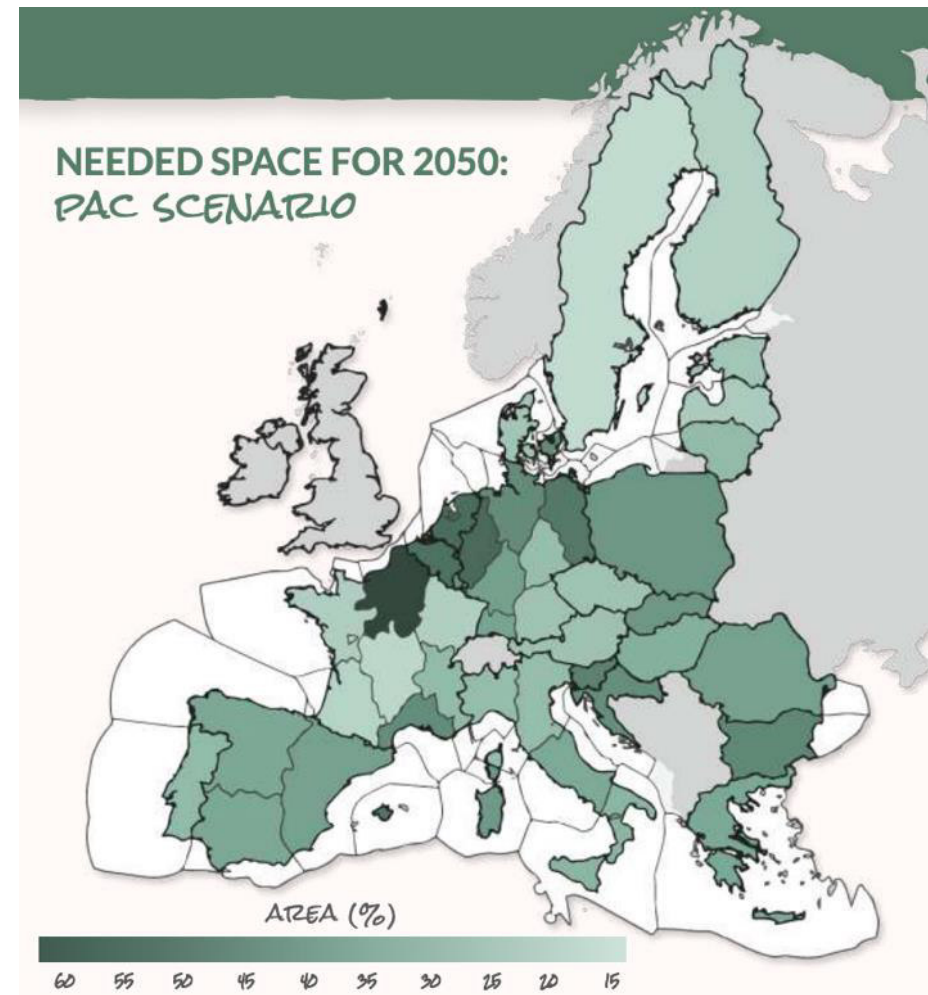
All decarbonisation scenarios RGI has analysed assume that electrification will (and needs to) increase:

- Paris Agreement Compatible (PAC) Scenario aims at achieving 100% renewables and net-zero greenhouse gas emissions by 2040.
- CLEVER Scenario focuses on reaching 100% renewables and climate neutrality by 2050 through sufficiency and efficiency measures.
- Distributed Energy (DE) and Global Ambition (GA), both developed by European Network of Transmission System Operators for both Electricity and Gas (ENTSO-E and ENTSO-G) for the 2022 Ten-Year Network Development Plan (TYNDP).

IMPLEMENTATION MUST ACCELERATE, BUT...



- ...the deployment of renewable and grid infrastructure requires substantial resources: water & space on land & at sea.
- Increasing competition over these resources can lead to conflicts among different actors and uses.
- Energy system optimisation needs to be planned in temporal and geographical terms





01

SPATIAL & TEMPORAL OPTIMISATION AND ENERGY SYSTEM PLANNING

- Efficiently mapping out spatial requirements for energy infrastructure on land and seas.
- Facilitating discussions to maximise efficiency, diversify the energy mix, minimise environmental impacts, and create a robust foundation for energy system planning.
- Bring clarity who needs what by when.

02

DECARBONISATION OF LARGE ENERGY CONSUMERS - 24/7

- Understand and reward system services by the demand side. 24/7 is an opportunity only if large consumers become active and dynamic actors at system level

03

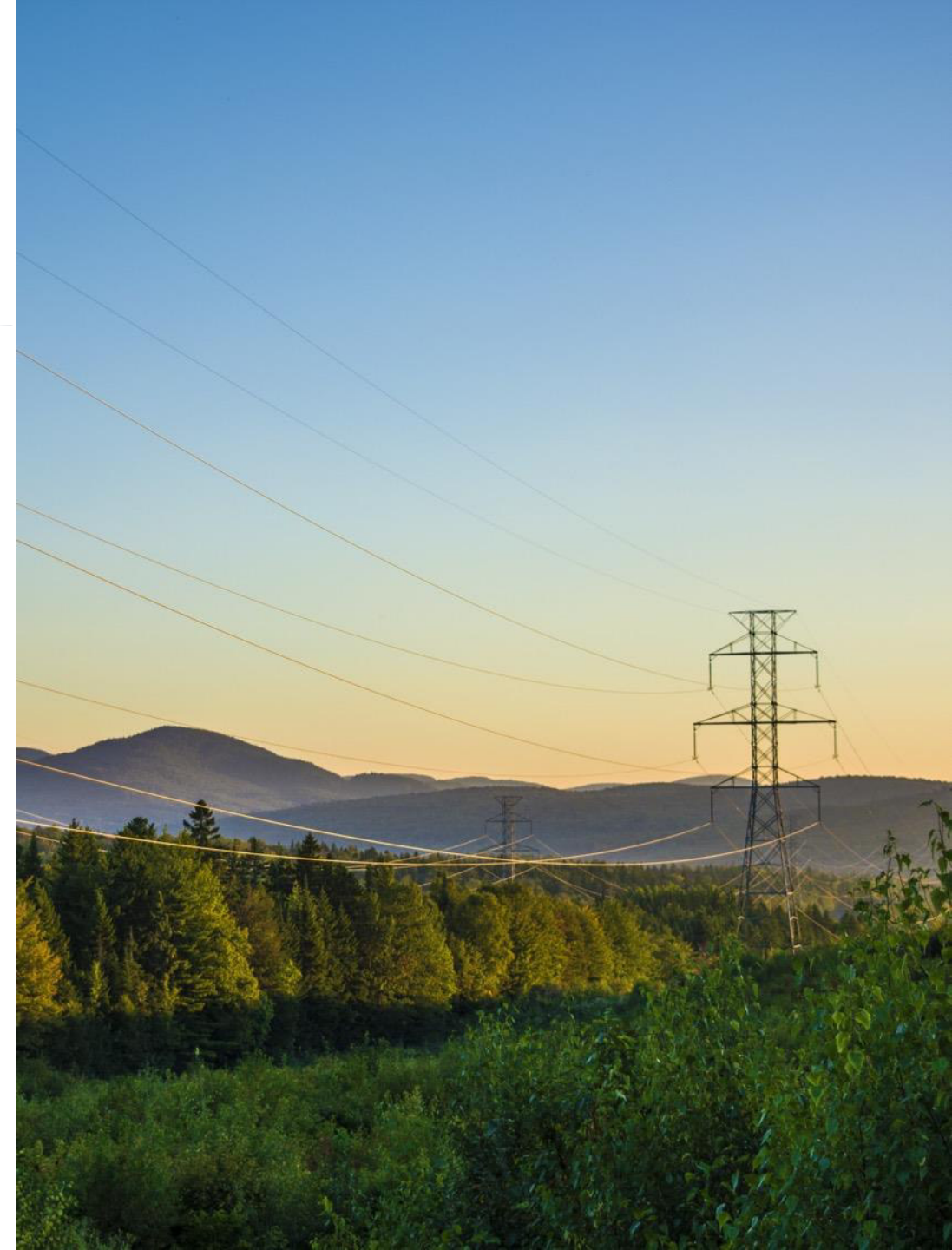
ADAPTING TO CLIMATE CHANGE AND SCARCITY: RESILIENCE AND CIRCULARITY

- Tackling climate challenges through resilience strategies while seamlessly integrating adaptation and circularity measures into infrastructure planning.

04

HOLISTIC PARTICIPATORY APPROACHES IN ENERGY SYSTEM PLANNING AND IMPLEMENTATION

- Engaging diverse stakeholders in every step of energy system planning and implementation to ensure a citizen-supported energy transition, fostering widespread energy infrastructure acceptance.



HOW TO RESPOND TO CHALLENGES?

ENERGY CRISIS

- Reduce waste
- Increase national resources
- Optimise utilisation

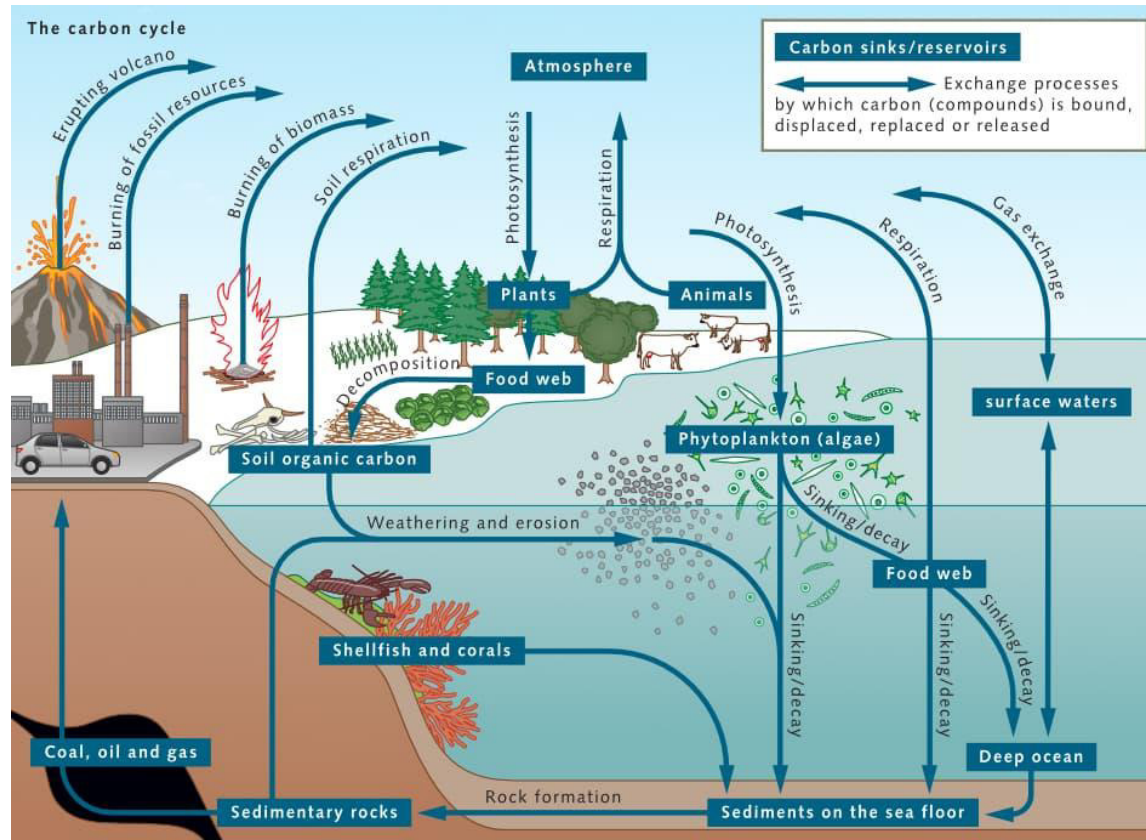
CLIMATE CRISIS

- Decarbonise faster
- Increase RES deployment
- Expand the grid/Electrify

BIODIVERSITY CRISIS

- Reduce waste
- Decarbonise faster
- Protect nature and people

NO CLIMATE SECURITY WITHOUT NATURE

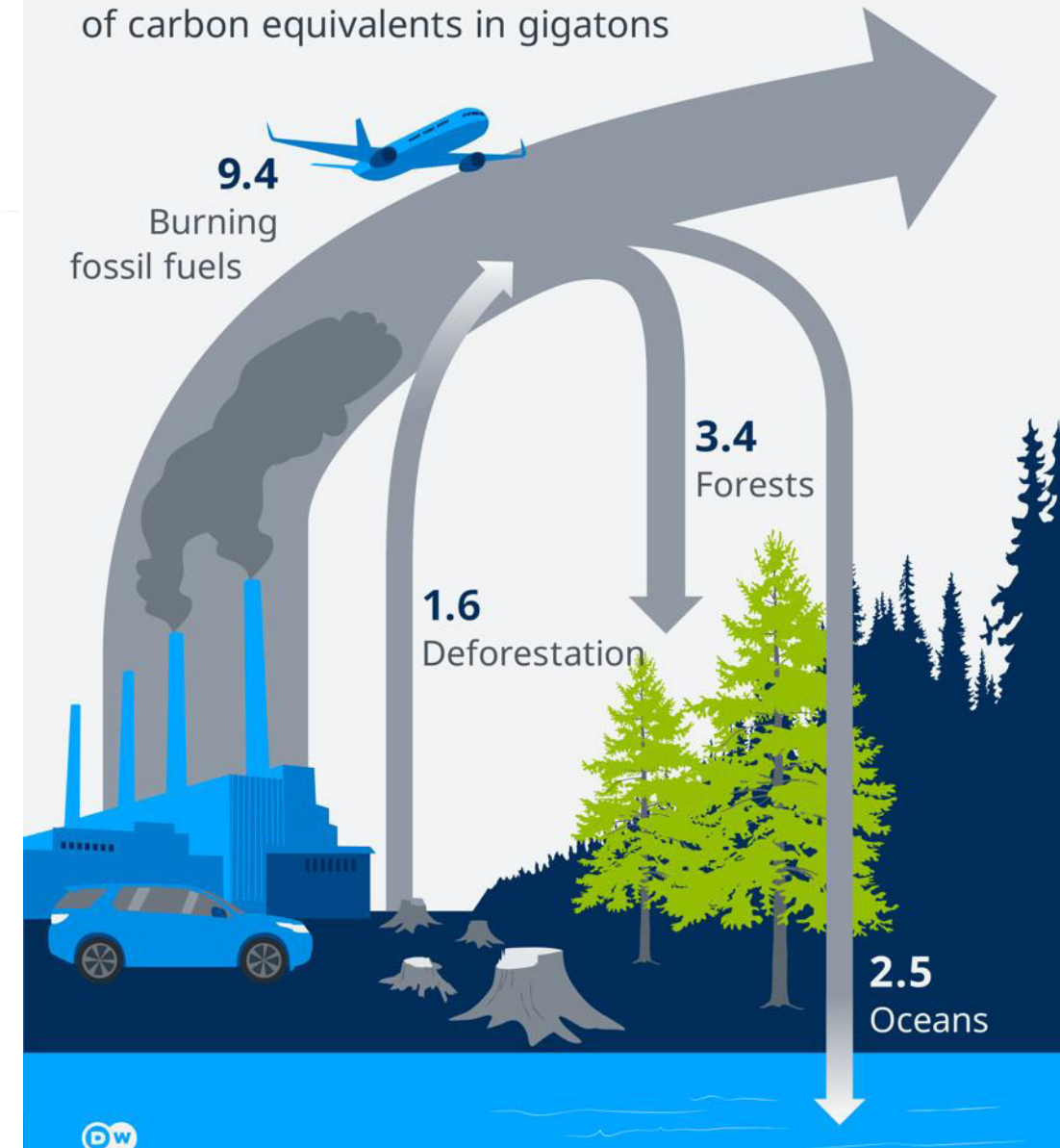


Source: <https://worldoceanreview.com/en/wor-8/the-role-of-the-ocean-in-the-global-carbon-cycle/how-the-ocean-absorbs-carbon-dioxide/>

Source: DW (<https://www.dw.com/en/carbon-sinks-how-nature-helps-fight-climate-change/a-59835700>)

The carbon cycle

Emissions and natural absorption of carbon equivalents in gigatons



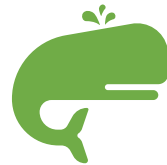
NATURE IS YOUR ALLY, NOT YOUR ENEMY

- Comprehensive environmental data collection can lead to

Faster deployment

- Bird Protection, IVM and Nature-Inclusive Design can lead to

More resilient grids

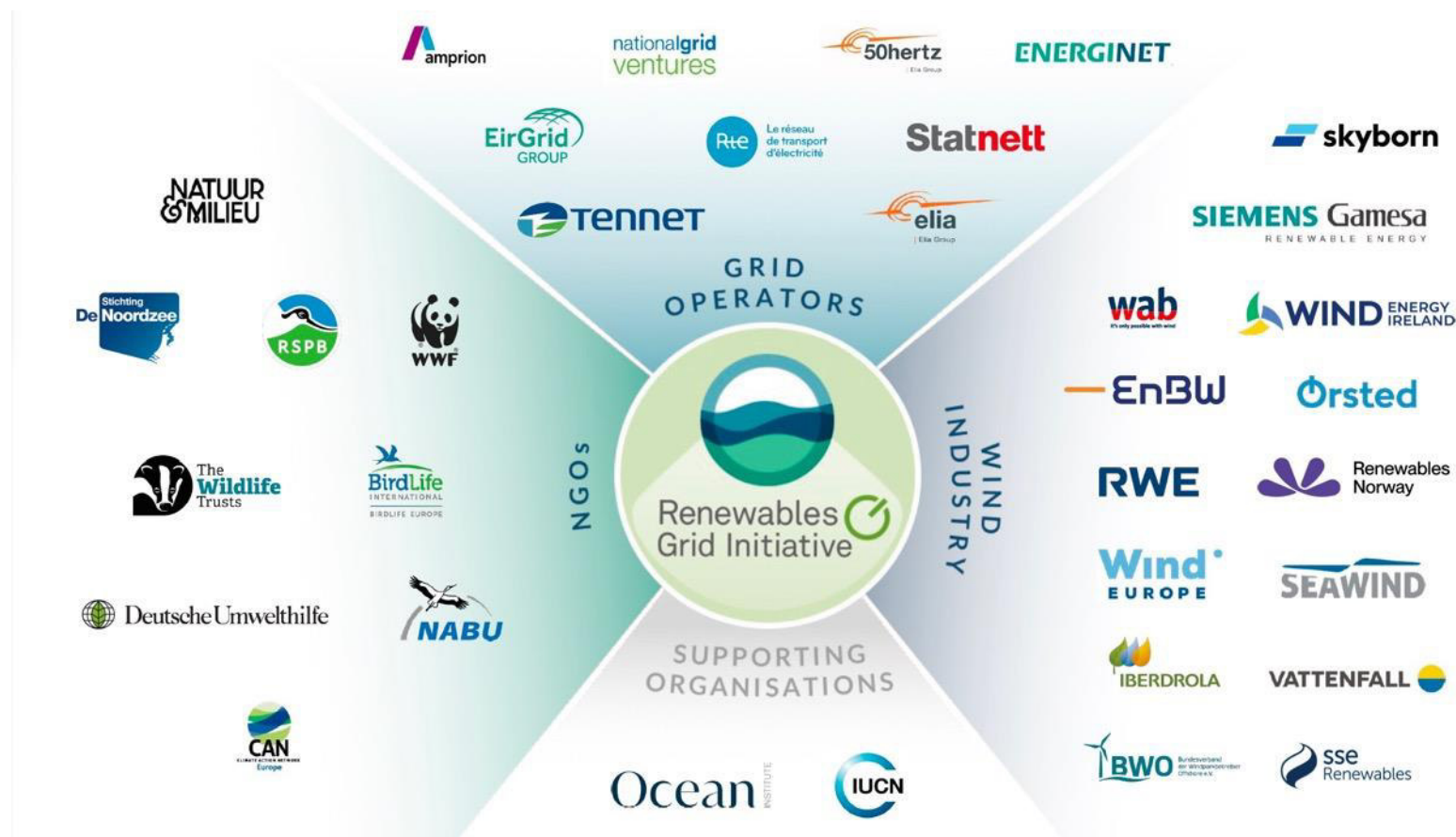


- Proper maritime spatial planning, restoration of marine ecosystems, and Nature Inclusive Design offshore can lead to

- Coexistence with other offshore activities and faster deployment

OFFSHORE COALITION FOR ENERGY AND NATURE

Identifies solutions on how to improve and speed up the planning and deployment of **offshore wind development and grid infrastructure** while preserving and restoring our European seas.



THERE IS NO TRANSITION WITHOUT PEOPLE

THERE IS NO TRANSITION WITHOUT PEOPLE



4 INGREDIENT RECIPE FOR PEOPLE-POSITIVE GRIDS:



Permitting standards, processes and assessments

Don't deregulate, improve implementation



People and citizens are your employers
The energy transition cannot happen without citizens' support

Understand their needs, respect and ask them how to achieve set goals



Empower energy regulators

Projects need to add value and not extract value. The cheapest is often the most expensive for society. Create local benefits.



Change the narrative around grids

Explain and defend necessary grid projects locally. Quality wins!

HOW TO RESPOND TO CHALLENGES?

ENERGY CRISIS

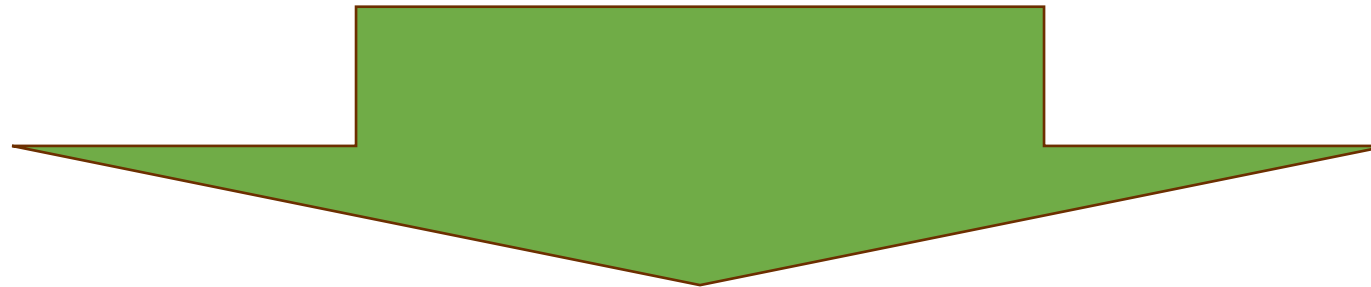
- Reduce waste
- Increase national resources
- Optimise utilisation

CLIMATE CRISIS

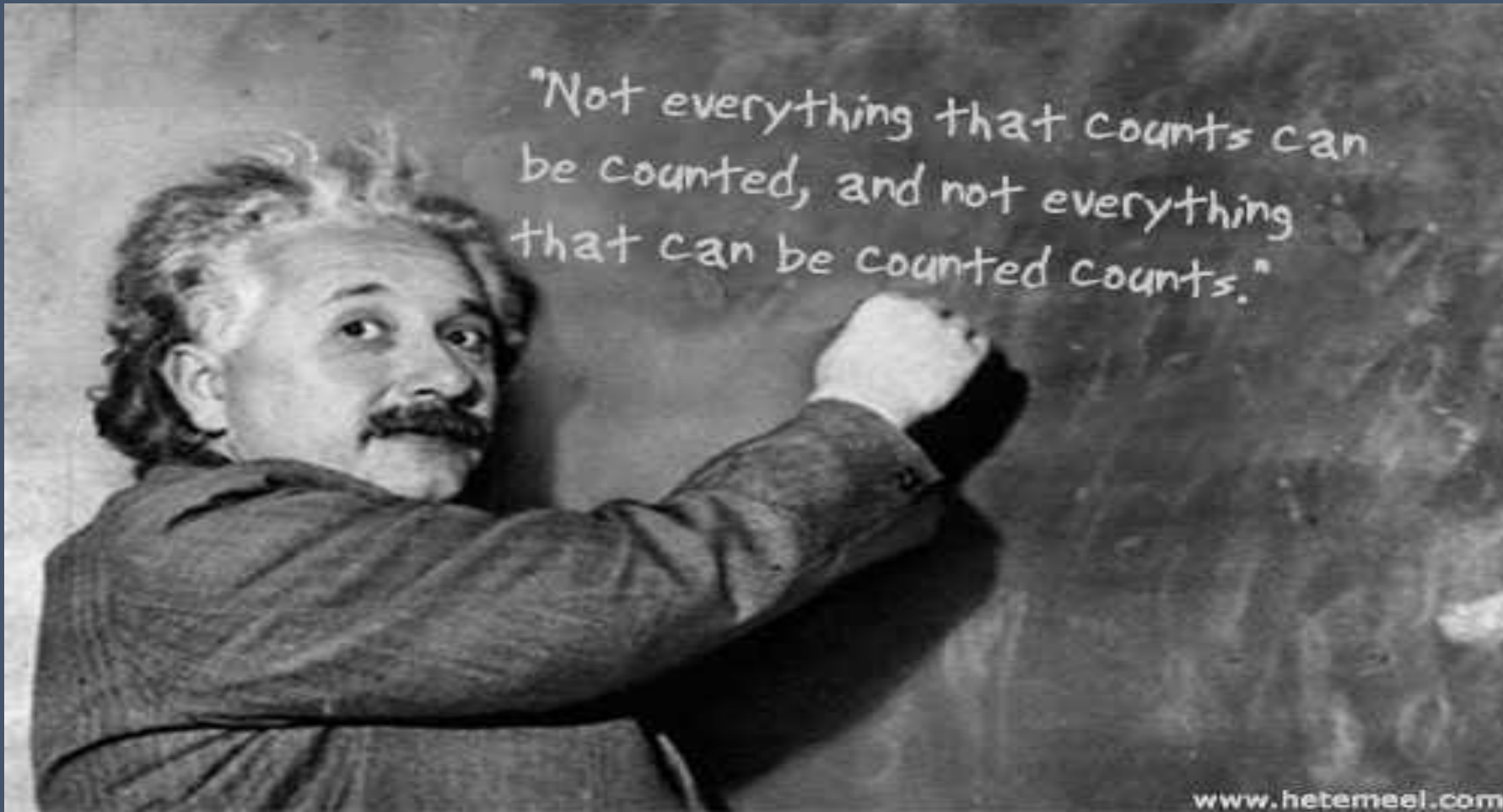
- Decarbonise faster
- Increase RES deployment
- Expand the grid/Electrify

BIODIVERSITY CRISIS

- Reduce waste
- Decarbonise faster
- Protect nature and people



Increase Scale and Speed – Build well always



MEASURING CONTRIBUTIONS TO NPP



GINGR

Global Initiative for Nature,
Grids and Renewables

Vision

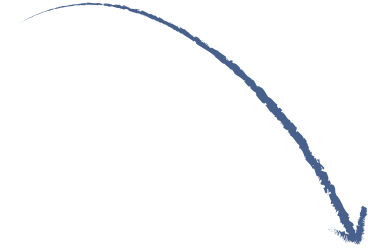
A rapid energy transition using renewable energy sources and electricity grids that embrace nature- and people-positive (NPP) objectives.

Mission

Enable a nature- and people-positive (NPP) renewable energy and grid deployment by establishing an industry-supported and government-endorsed monitoring and reporting framework on a global scale.



WHERE FROM HERE? CSRD REPORTING CONTRIBUTIONS



- Corporate Sustainability Reporting Directive (CSRD)
- Requires developers to quantify and transparently disclose the impacts of their infrastructure on biodiversity and other sustainability criteria
- Complying with the CSRD can effectively address most other environmental policies and needs
- GINGR can support the development of a common framework to accurately and transparently disclose contributions to CSRD and other sustainability indexes.

THANK YOU – *LET'S KEEP IN TOUCH!*



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Renewables
Grid Initiative 

